

## Some New Cave Spiders in Japan

Toshihiro KOMATSU

### *Urobia* n. g.

Family Agelenidae

Subfamily Ageleninae

Genus *Urobia* gen. nov.

This Genus is allied to *Caelotes* Blackwall 1841, but direct eyes absent. Row of indirect eyes is slightly incurved. Clypeus is a little longer than a diameter of first indirect eye.

Chelicerae slightly convex, with two teeth on the posterior margin of the furrow. Labium longer than wide. Posterior spinnerets are long and the second joint equal to the length of the first joint.

Genotype species: *Urobia hexommata* n. sp.

### *Urobia hexommata* n. sp. (Fig. 1)

(Japanese name; Urotanagumo)

Loc. and Date:—Kazaana cave, Nagano Prefecture July 19th, 1942 adult ♀

Collector:—Toshihiro Komatsu

Measurements in millimeters:—Total length 6.7; cephalothorax 2.7, width 1.7; abdomen 3.8, width 2.2

| Segments   | Total | Femur | Patella | Tibia | Metatarsus | Tarsus |
|------------|-------|-------|---------|-------|------------|--------|
| Appendages |       |       |         |       |            |        |
| 1st leg    | 8.8   | 2.3   | 0.9     | 2.6   | 1.8        | 1.4    |
| 2nd leg    | 8.0   | 2.2   | 0.9     | 1.7   | 1.7        | 1.3    |
| 3rd leg    | 7.5   | 2.0   | 0.8     | 1.5   | 2.0        | 1.2    |
| 4th leg    | 10.2  | 2.6   | 0.8     | 2.3   | 2.9        | 1.7    |
| Palp       | 3.3   | 1.0   | 0.3     | 0.7   |            | 1.3    |

Cephalothorax brownish yellow, is longer than wide. Radiating grooves, cephalic suture and median fovea are evident. Between ocular area and median fovea, there are some black hairs.

Chelicera reddish brown, and its width and femur of 1st leg is 1.5 : 1 in ratio. Anterior margin of the furrow is provided with 3 teeth, posterior margin 2 teeth. Maxillae reddish brown, are longer than wide, furnished with black hairs. Lip also reddish brown, tip white, its length and maxillae 1.4 : 2 in ratio.

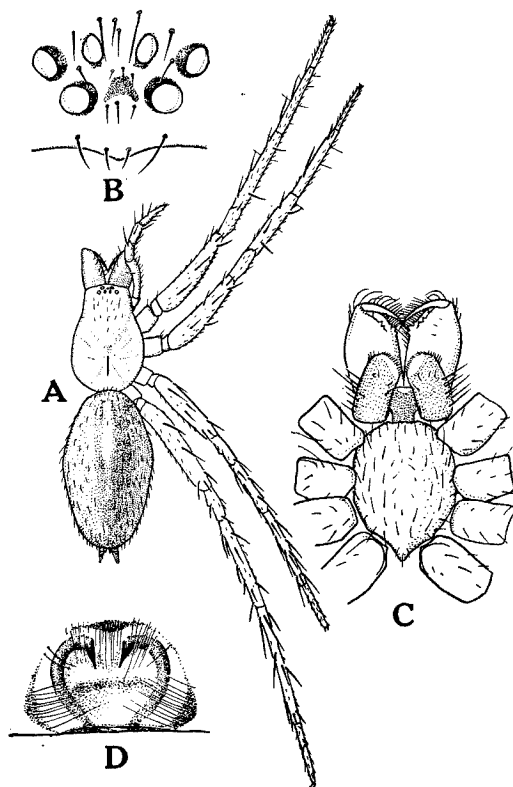


Fig. 1. *Urobia hexommata* n. sp. ♀ adult D. epigynum

to the length of the first joint.

Direct eyes absent, but their black V-shaped pigment remains.

Indirect eyes forms an incurved row. Clypeus is a little longer than a diameter of 1st indirect eyes. Diameters of all indirect eyes are equal, but 3rd indirect eyes are oval in shape. 1st i. e. is separated from each other by 2 times, from 2nd i. e. by  $1/2$ , and from 3rd i. e. by  $6/5$  of their diameter. 3rd i. e. separated from each other by 1.7 times, and from 2nd i. e. by 1.5 of their width.

***Leptoneta speciosa* n. sp. (Fig. 2)**

(Japanese name: Kazaana-mashiragumo)

Loc. and Date:—Kazaana cave, Nagano Prefecture May 25th, 1942 adult 2 ♀

Kazaana cave, Nagano Prefecture July 19th, 1942 adult 1 ♂ (Holotype)

Sternum longer than wide and brownish yellow in colour, with long black hairs, Palpi brownish yellow, furnished with many hairs and strong spines, and a claw with many teeth.

Legs brownish yellow in colour, have many black hairs and spines. Tip of tarsus has paired claws with teeth, and third claw with 3 teeth. Abdomen is long, oval in shape and upper part pale violet in colour, with a white longitudinal spot and black hairs

Anterior spinnerets are stout and short. Distance between these spinnerets is longer than the diameter; second joint is very short. Posterior spinnerets are long and large, second joint equal

Collector : —Toshihiro Komatsu

I. Adult ♂

Measurements in millimeters :—Total length 2.2; cephalothorax 1.2, width 0.8; abdomen 1.2, width 0.7

| Segments<br>Appendages | Total | Femur | Patella | Tibia | Metatarsus | Tarsus |
|------------------------|-------|-------|---------|-------|------------|--------|
| 1st leg                | 5.9   | 1.6   | 0.3     | 1.8   | 1.2        | 1.0    |
| 2nd leg                | 4.8   | 1.3   | 0.3     | 1.4   | 1.0        | 0.8    |
| 3rd leg                | 4.2   | 1.1   | 0.2     | 1.2   | 1.0        | 0.7    |
| 4th leg                | 5.3   | 1.4   | 0.2     | 1.6   | 1.0        | 0.9    |

Cephalothorax : Longer than wide, side view is arched at the point of about 1/3 far from front. Interval of mediate points between second coxae and third coxae of both sides is the widest. From median fovea to ocular region there are some black hairs. Palp: Tibia has two ocustis setae and two large paracymbiums, patella < tibia < tarsus. Chelicera: both margins of the furrow are provided with 7-9 teeth. Maxillae are longer than wide. Lip wider than long, semi-elliptical. Sternum is slightly longer than wide, separating fourth coxae, has black hairs. Abdomen : oval, has black hairs.

Six eyes are almost equal in diameter. 1st eyes are separated from

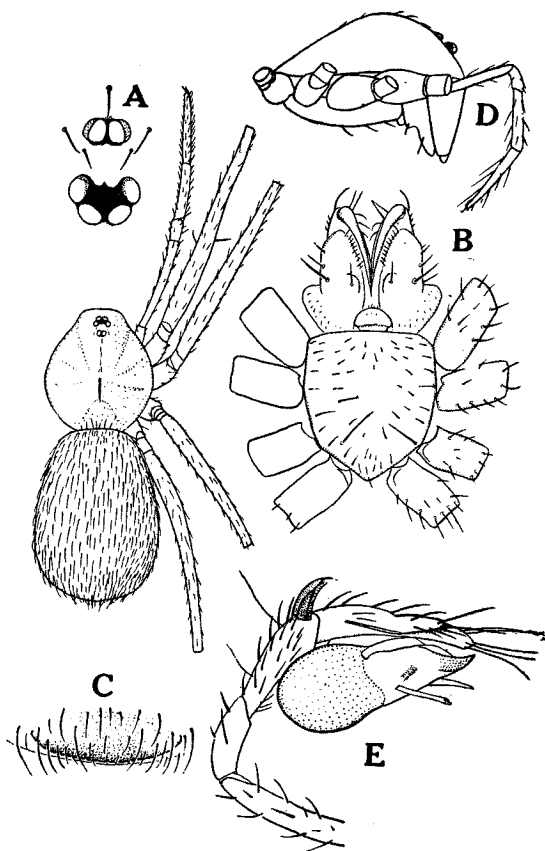


Fig. 2. *Leptoneta speciosa* n. sp. ♀ adult E. Palp of adult ♂

each other by  $1/4$ , and from 2nd by  $1/5$  of their diameter. 2nd eyes are apart from each other a little longer than their diameter. 3rd eyes are somewhat square in shape, separated from 2nd eyes by their diameter. Vertical axes of 2nd eyes intersect backward with each other, and 3rd eyes also intersect backward.

Colour (in alcohol): Cephalothorax, chelicera, legs and sternum brown. Abdomen dull white.

## II. Adult ♀

Tip of palp has a claw with teeth. Anterior spinnerets are short and the second segments are small. Posterior spinnerets are slender and grow to a point. Remarks: —This species is distinguishable from *Leptoneta convexa* E. Simon 1872, by ♂ palp.

### *Sarutana* n. g.

Family Leptonetidae

Subfamily Ochyroceratinae

Genus *Sarutana* gen. nov.

Adult male: Cephalothorax is oval in shape, with six eyes. Radiating grooves and cephalic suture are absent. Inside of maxillae is paralleled to each other but outside is C letter in shape. Labium is semicircular and wider than long. 1st eye is the largest, and 3rd eye is the smallest. Intervals of 2nd and 3rd eyes are longer than the diameters of 2nd eyes. Sternum is ovoid and pointed at the base. Palp: Femur has many black spindle-shaped spines, and tibia has two large spines and a funnel shaped projection.

Genotype species: *Sarutana glabra* n. sp.

### *Sarutana glabra* n. sp. (Fig. 3)

(Japanese name: Ishikawa-mashiragumo)

Loc. and Date: —Sarutadō cave, Shikoku Island Japan December 1948 adult ♂

Collector: —Jūjirō Ishikawa

Measurements in millimeters: —Total length 2.1; cephalothorax 0.8, width 0.6; abdomen 1.2, width 0.9

| Segments   | Total | Femur | Patella | Tibia | Metatarsus | Tarsus |
|------------|-------|-------|---------|-------|------------|--------|
| Appendages |       |       |         |       |            |        |
| 1st leg    | —     | 1.9   | —       | —     | —          | —      |
| 2nd leg    | —     | 1.5   | —       | —     | —          | —      |
| 3rd leg    | —     | 1.2   | —       | —     | —          | —      |
| 4th leg    | 5.6   | 1.6   | 0.2     | 1.7   | 1.3        | 0.8    |

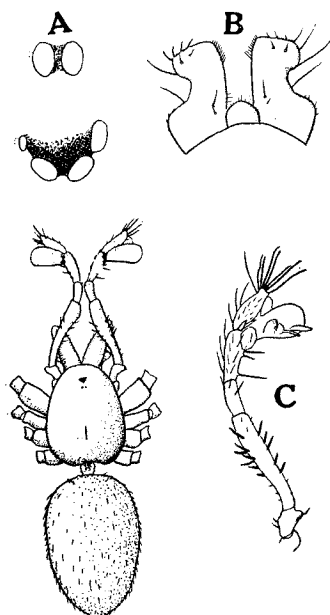


Fig. 3. *Sarutana glabra* n. sp.  
♀ adult

Cephalothorax brownish yellow is oval in shape. Sternum, length: width=28:27, pointed posteriorly. Abdomen pale yellow is oval in shape. Legs are pale brown, their spines are grey and hairs are yellow.

2nd eye on the right side is very smaller than the left. Diameters of 1st, 2nd (left side) and 3rd eyes are 9:7.5:7 in ratio, and interval of 2nd and 3rd is 9:5 in ratio. Vertical axes of 2nd eyes run parallel with each other, 3rd eyes also run parallel.

The Japanese name is given in compliment to Prof. J. Ishikawa of Kochi Women's College, through whose favour I was able to examine this spider.

***Masirana nippara* n. sp. (Fig. 4)**

(Japanese name: Nippara-mashiragumo)

Loc. and Date:—Nippara cave, Tokyo adult 2♂ 3♀

Collector:—Toshihiro Komatsu

Adult ♂ (Holotype)

Measurements in millimeters:—Total length 2.4; cephalothorax 0.9; abdomen 1.5

| Segments   | Total | Femur | Patella | Tibia | Metatarsus | Tarsus |
|------------|-------|-------|---------|-------|------------|--------|
| Appendages |       |       |         |       |            |        |
| 1st leg    | 6.20  | 1.70  | 0.28    | 1.90  | 1.32       | 1.00   |
| 2nd leg    | 4.92  | 1.40  | 0.26    | 1.40  | 1.04       | 0.82   |
| 3rd leg    | 4.12  | 1.20  | 0.26    | 1.08  | 0.94       | 0.64   |
| 4th leg    | 5.66  | 1.60  | 0.26    | 1.66  | 1.24       | 0.90   |

3rd eyes oval in shape. Vertical axes of 2nd eyes intersect backward with each other, and vertical axes of 3rd eyes run parallel with each other.

|                                  | in ratio |
|----------------------------------|----------|
| Diameter of 1st eye              | 12       |
| "      2nd "                     | 11       |
| "      3rd " (major diameter)    | 10       |
| Length of 3rd eye                | 10       |
| Width      "                     | 8        |
| Interval between 2nd and 3rd eye | 7        |
| "          each 2nd eye          | 16       |

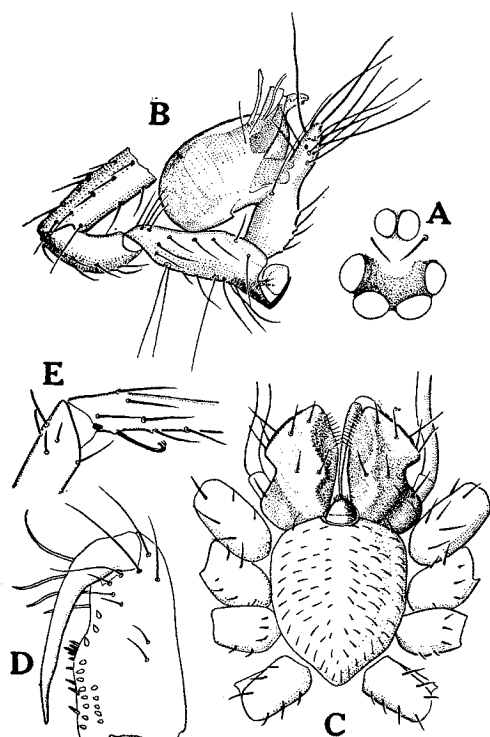


Fig. 4. *Masirana nippara* n. sp. ♀ adult E. side view of tibia & metatarsus (2nd leg)

Chelicera: Anterior margin of the furrow is provided with 11 teeth, and posterior with 5 teeth. Labium wider than long, is pointed at tip. Maxillae are paralleled, and tips are enlarged, fore-edges bear rows of teeth. Sternum longer than wide, is pointed at base. Abdomen longer than wide. Palp; tip of tibia has an acute-angled spine, and a funnel-shaped projection.

Colour (in alcohol): Cephalothorax, chelicera, legs, sternum yellowish brown, abdomen grey.

附記 文部省科学研究費によつて行つてきた日本産洞穴性蜘蛛の研究の一部を発表するにあつて次の事柄を附記する。

1. *Urobia hexommata* はタナグモ科に属する直眼退行の稀な例で、地中海東部に産する *Hadites* (間眼 *excurve*)、ポルトガル産の *Malthonica* (額長が第一間眼より短い) などが既に知られている。この蜘蛛を産する風穴は諏訪湖の東南、中部地溝帯の西側、赤石山系が断層をなすその断層面に開く非石灰洞で、相当の年月を経たものと推定される。

2. *Leptoneta speciosa* は同様風穴産で、一重の皿網を作っている。相当数を採集で

きる。

3. *Sarutana glabra* は四国の猿田洞産で単眼一個が退行の傾向をみせているので、相当古い洞穴で、深い個所に生活するものと推定している。マシラグモ科における単眼の退行は珍らしいと云えぬようで、最近の岐阜県の例（未発表）では 6, 4, 3 という変異を示していた。

4. *Masirana nippara* も一重皿網で相当数採集できる。

最後に文献其他に御示教を得た岸田久吉先生の相変らぬ御芳情に深謝の意をあらわします。

## 会 報

○本会は国内は勿論、最近では海外に広く知られて居り、各国から雑誌交換や注文があり、また書店を通じての申込みも増加しつつあります。

現在交換している雑誌は次の通りです。

閲覧御希望の方は御申出で下さい。

1. Entomologische Berichten (Nederland)
2. Tulane Studies in Zoology (U.S.A.)
3. Ann. Zool. Soc. "Vanamo" (Finland)
4. むし (九 大・農 昆)
5. 衛生動物 (日本衛生動物学会)
6. 農 学 研 究 (大原農業生物研究所)
7. Nature Study (大阪市立自然科学博物館)
8. Bulletin of the Osaka Municipal Museum of Nat. Hist. (同 上)

海外の Library からの要望により送付している所は次の三つ、

1. The Library of Congress (U.S.A.)
2. The Science Museum, South Kensington (England)
3. The University of Oxford (England)

その他海外の蜘蛛学者や書店を通じての注文で約 50 部送っています。

( Atypus は海外には出していません )

○次号原稿締切 ACTA は 4 月末、ATYPUS は 3 月末までに御願います。